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By-Lerner, Janet W.

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Through a review of the literature, diverse definitions of the term "dyslexia" are presented, and the historical development of the term is looked at. Two independent strands of thought development--medical and educational--are revealed. Medical studies have sought for a common behavior pattern of all dyslexic children and for clear-cut evidence of neurological etiology. Conclusive evidence from both a statistical and pathological standpoint is still lacking. Educators tend to reject the theory of neurological dysfunction as a sole cause for reading failure. In contrast, they emphasize the developmental sequence of reading skills and search for the child's break on the developmental reading pattern. They see the diagnosis of dyslexia as lacking operationality in that it does not lead to appropriate teaching strategies. The medically oriented clinician is likely to focus on the disabled child and emphasize individual treatment, while the educator is likely to devote a portion of his time to the developmental reading program of the entire school in seeking preventative measures. The study concludes that a need exists for a pooling of thought and research from both the educational and medical professions. A bibliography is included. (RT)

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DYSLEXIA OR READING DISABILITY:

A THORNE BY ANY NAME

by Janet W. Lerner, Ph.D.
Northeastern Illinois State College

Many articles discussing dyslexia emphasize that the dyslexic child must be identified from among others with reading disabilities because the therapeutic measures required to help the child with dyslexia are drastically different from the treatment needed by children afflicted with other kinds of reading disability. Upon investigation, however, one often discovers the techniques suggested for treating dyslexia are identical to those used for children with reading disability and similar to approaches that have been used in many good developmental reading programs through the years.

A professional who works in a dyslexia-oriented institution recently told me of a new treatment that they were using for dyslexia--a new multi-sensory approach to learning letters and their sound equivalents. This method enabled the child to use not only his visual, auditory, tactile, and kinesthetic avenues to learning letters by seeing, hearing, touching, and feeling them; but the learning was reinforced through the gustatory modality. The treatment of dyslexia included stimulation of the gustatory pathway with a cookie topped with frosting shaped into a letter enabling the child to actually taste the letter with his tongue.

A quick check into the history of American reading instruction revealed that this "new" approach to cure dyslexia had been used in the early colonial period to teach reading. Gingerbread cookies were formed into the shape of the letters of the alphabet

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and as the child learned a letter he was permitted to eat it.[1] If HEW funds for reading research had been available during this period, I am certain we would have some enlightening studies on the relationship between rate of learning, time spent on phonics, and dental impairments. I suspect this learning media is budgeted under "consumable materials."

With dyslexia being discussed with increasing frequency in professional circles and before the general public, it is easy to give a few illustrations of the popularity of this topic. The professional organization that concerns itself mainly with the field of reading, the International Reading Association, has become aware of dyslexia. While this word was not used in the title of any of the annual conference meetings from 1960 to 1967, dyslexia was part of the title of five different sessions of the 1968 conference. The multi-disciplinary journal, The Journal of Learning Disabilities devoted an entire recent issue to dyslexia. The editor noted that dyslexia has become so respectable that "it now qualifies for inclusion in society's 'blue book' of medico-educational terminology."[2] Dyslexia was analyzed and a child was diagnosed as dyslexic in a recent "Ann Lander's Column" in the Chicago Sun-Times in response to a problem presented in a "Dear Ann Landers" letter from a reader.[3] The elevated status of the topic is perhaps most apparent in that dyslexia now rates a mailing address in our nation's capital and a National Advisory Committee.[4]

There is little doubt that professionals in the fields of learning disabilities, exceptional education, reading, and pediatrics will be questioned about the phenomenon of dyslexia.

In olden times when I labled myself as a reading specialist, I was typically questioned about the best way to teach reading--phonics or look-say. Today, however, when I admit to being in the field of reading, I am most frequently asked about dyslexia.

Certain questions must be clarified. What is dyslexia? Have scholars in the field of reading been aware of dyslexia as a factor in reading failure? What theoretical frameworks led some diagnosticians to use the term, dyslexia, and others to prefer the term, reading disability? The purpose of this paper is to raise and discuss these questions.

What is dyslexia?

A review of the literature reveals that the word, dyslexia, is currently being used in a variety of ways by different authors. The diverse definitions include a) evidence of an etiology of brain damage, b) the observation of behavioral manisfestations of central nervous system dysfunction, c) the indication of a genetic or inherited cause of the reading problem, d) the inclusion of a general language disability along with the reading problem, e) the presence of a syndrome of maturational lag, f) a synonym for reading retardation, and g) the description of a child who has been unable to learn to read through the regular classroom methods.

The following quotations illustrate the range of these diverse definitions:

> Brain damage: Brain damage can obviously produce loss of an ability to read (alexia) in an adult and prevent learning ability (dyslexia) in a child.[5]
>
> Neurological dysfunction. Dyslexia is a genetic, neurological dysfunction, uncomplicated by other factors.[6]

> Genetic or hereditary. . . . There exists a "vulnerable family syndrome. . . . an inherited anomoly, which alone may cause some forms of learning disorders, i. e., dyslexia.[7]
>
> Psycho-linguistic breakdown. Dyslexia is being re-examined as a concept and re-interpreted as a breakdown in a psycho-linguistic functioning or communication process.[8]
>
> General reading disability. . . . children who are dyslexic, that is children who are of average intelligence or above who are finding it difficult to learn to read. . . . the four sub species of dyslexia are primary emotional communicative dyslexia, minimal neurological dysfunctional dyslexia, genetic dyslexia, and dyslexia due to social or cultural or educational deprivation.[9]
>
> Defective reading. Dyslexia. . . simply means that there is something wrong with the person's reading.[10]

One of the most descriptive definitions was given by a speaker I recently heard who referred to Geschwind's[11] description of the pathology of cases of alexia as a "leison in the posterior end of the corpus callosum prevents visual stimuli from being conveyed from the right visual region to the speech areas where they could arouse auditory associations," and the speaker clarified this definition by adding that--as a consequence the individual is a lousy reader.

This large and diverse range of current uses and definitions suggest that an examination of the historical development of the term,dyslexia, would be useful. The literature reveals two almost independent strands of development of thought. One strand is found in the literature on reading which developed from the fields of medicine, psychiatry, neurology, ophthamology, and speech. Much of this literature originated in Europe. The other discussion of dyslexia is to be found in the writings of educators and psychologists, particularly in the field of reading, and it originated largely in the United States. A brief review of each of these two strands of literature highlights the nature of the controversy surrounding dyslexia.

Strand 1: The Medical Perspective

In 1896, Morgan, an English physician described a condition he called "congenital word-blindness" in a fourteen year old boy who could not read although he appeared intelligent. The report, published in the British Medical Journal, attributed a neurological etiology to the condition he called congenital word-blindness.[12]

In a widely-read monograph in 1917, Hinshelwood, another English physician stated that word-blindness is a pathological condition due to a disorder of the visual centers of the brain which produced difficulty in interpreting printed and written language. He further stated that the condition was not due to visual or intellectual defects; yet ordinary teaching methods had failed to teach the child to read.[13]

One of the early users of the word, developmental alexia or dyslexia, was Schmitt in 1918.[14] The rationale was as follows: Alexia is a medical term signifying the loss of ability to read in adults because of a known injury to the brain. Since alexia or acquired word blindness occurs in adults who had already learned to read, dyslexia was presumed to be developmental word-blindness occuring in children who had not yet learned to read. A presumption was made that in cases of dyslexia or developmental word-blindness the same areas of the brain had been damaged as in cases of alexia or acquired word-blindness.

In 1937, Orton,[15] an American neurologist, broadened the concept of dyslexia to "a specific language disability" and developed a theory based on the lack of the establishment of cerebral dominance as a cause of language and reading difficulty.

Orton preferred the term, strephosymbolia, meaning twisted symbols, to describe the characteristics of the child.

In recent years there have been other major contributors to the literature of the medical strand. Hallgren,[16] 1950, working in Sweden concluded that the dyslexia pattern is inherited and the condition is genetic in nature. Hermann,[17] a Danish neurologist, in 1961, attempted to establish a medical explanation of dyslexia. Money,[18] reported on symposiums held at Johns Hopkins Medical School, in 1962 and 1966, which met for the purpose of evolving a syndrome of dyslexia.

An English neurologist, Critchley,[19] in 1964, continued the search for a concept of dyslexia by endeavoring to detect common symptoms of this group, but found no single clinical feature which could be accepted as "pathognomic." Working within the medical and speech schools at Northwestern University, Johnson and Myklebust[20] concluded that dyslexia is a reading disorder which results from a dysfunction in the brain. These authors view dyslexia as not only a reading disorder, but as part of a basic language and learning disability and as a disorder of symbol behavior. They subdivide the condition into auditory dyslexia and visual dyslexia.

In summary, the medical perspective of the condition called dyslexia has been under study for about seventy years, and over 20,000 books, articles and papers have been published on the subject.[21] These studies have sought for a common behavior pattern of all dyslexic children and for clear-cut evidence of a neurolgocial etiology. To date conclusive evidence is still lacking from both a statistical and pathological standpoint to clearly isolate and identify the dyslexic child.

Strand 2: The Educational Strand.

The second group of scholars concerned with problem readers and reading problems comes from the disciplines of education, psychology, and reading. Although these writers are aware of the theoretic views of those scholars who seek and perceive a dyslexic syndrome, they question the operational value of this view. The workers within the educational framework are concerned with children who display symptoms which appear to be identical to those symptoms described as dyslexic within the medical framework of strand one. However, the educators see insufficient evidence to place such symptoms within a diagnostic entity called dyslexia. In addition, the reading specialists see the label of dyslexia as confusing and adding little or no knowledge of diagnostic or remedial value.

Early reading studies of reading failure such as those by Monroe in 1932,[22] and Robinson[23] in 1946, investigated the many causes of reading failure utilizing the research available at those periods. The neurological factor was discussed in these works, but it was noted that the early theories had not been strongly established.

> The indirect methods of investigation have been used in the study of most reported cases of alexia, or word-blindness. The neurologists apparently have noted the symptoms, ruled out all other causes, and made a diagnosis of alexia or word-blindness, since no other cause could be located. Differences of opnion may exist and may not be proved correct or incorrect because the direct approach is not possible.[24]

A similar view was maintained by Vernon,[25] an English psychologist, in 1958, who examined the available evidence of congenital word-blindness but found "no clear evidence as to the

existence of any innate organic condition which causes reading disabilities." Further, she asserted that the term, dyslexia, was unacceptable because it was not comparable to alexia, the loss of reading ability produced by cortical injury.

Harris,[26] in 1961, held that the dyslexia hypothesis had little value for the reading clinician.

> Imposing technical terms were proposed. . . dyslexia. . . by those medical men who looked for a fundamental defect or deficiency in the children's nervous system as the reason for his failure to learn to read. . . . it seems probable at the present time that only a small proportion of the reading disabilities to be found in the schools are of this type.

Bond and Tinker,[27] in 1957, also viewed the concept of dyslexia as having little diagnostic and prognostic value. They stated:

> . . . Hinshelwood has, in the opinion of most authorities wrongly and unwisely, applied the term congenital word-blindness to very young nonreaders. His attempt. . . is not of value to students of reading deficiencies.

These authors maintained this view in 1967,[28] as they concluded that since it is practically impossible to distinquish "specific dyslexia" cases from others of severe reading disability, "the clinical worker may question the value of the term."

In summary, scholars from the field of education have found it difficult to accept the term, dyslexia, as a diagnostic entity. They reason that when no other cause for the reading problem could be found, workers within the medical perspective presumed that brain damage or neurological dysfunction was the explanation of the reading failure. Researchers within the educational perspective, on the other hand, have tended to favor a pluralistic theory of causation, emphasizing the wide range of contributing handicaps and the continuity of problems from mild to severe.[29] Moreover, this group concluded that the case of the adult who has lost his ability to

read through cortical damage (alexia) cannot be likened to the child who is unable to learn the reading process.

Perhaps the divergence of perspectives of these two strands can best be illustrated with the titles of papers from the two fields. Two sessions at the International Reading Association Conference in 1968 were on the subjects, "Dyslexia: Is There Such a Thing?" and "Dyslexia--Fiction and Fact."[30] At the same time a title in the Journal of Learning Disabilities was "Dyslexia--Respectability at Last."[31]

Implications of the Differences in Perspectives.

What are some of the basic implications of the differences in these two perspectives? For purposes of discussion, the scholars working within the framework of Strand one will be called the medical perspective while those working with the framework of Strand two will be called the educational perspective.

1. While the scholars working within the medical perspective search for a single etiological factor as causal, the scholars from the educational perspective seek a combination of causes, feeling that it is not likely that a single factor can be shown to be causal.

2. The educators are likely to place greater emphasis on the developmental sequence of reading skills with more search for the child's break on the developmental reading pattern. The medically oriented student is likely to place greater focus on other concomitant disabilities.

3. For the educator, alexia, or the loss of reading skill in the case of an adult, is different from the inability to learn to read in the case of a child. Therefore, the term, dyslexia, is not generally used among this group. They emphasize the difficulty

of differentiating "maturational lag" from central nervous system dysfunction.

4. Educators see the diagnosis of dyslexia as lacking operationality in that it does not lead to appropriate teaching strategies. After the diagnosis of dyslexia is made, one must still investigate what reading skills are lacking, determine the child's optimal mode of learning, find appropriate materials, etc. The diagnosis of dyslexia alone provides few clues as to the appropriate treatment and teaching strategies.

5. While the medically oriented clinican is likely to focus solely on the disabled child and emphasize individual treatment, the educator is likely to perceive a broader role and function within the school and devote a portion of his time and energy to the developmental reading program of the entire school in seeking preventive measures.

The conclusions drawn from this study do not lead to an argument for or against the approach of either discipline. Each researcher should study the child with reading problems in terms of his own discipline and its framework and tools. Each discipline has built a substantial body of literature, but neither is benefiting sufficiently from the work and foundation that has already been made by the other. As a consequence, in tracing the literature, in inescapable observation is that the literature of one field is almost completely ignored by the other. A few authorities have been able to bridge the gap between the two perspectives, speaking in a voice that is meaningful to both while utilizing the framework and findings of each.

Our challenge is to strengthen this beginning by encouraging channels of communication. The plea to be made is to forget labels and begin to work together.

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